

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. - 8. (cancelled)

9. (currently amended) A power factor correction circuit for improving a power factor of a switching power supply, wherein said switching power supply is composed of said power factor correction circuit and a converter with a secondary winding and a primary winding coupled with a switching device, said circuit comprising:

a winding with an opposite polarity to said primary winding;

a diode with a p-type side and a n-type side, wherein said p-type side is coupled with said winding;

an inductor coupled with said n-type side of said diode; and

a capacitor coupled with said inductor, wherein said winding, said diode, said inductor and said capacitor are coupled in series, and said capacitor and said inductor have a common node connected with said primary winding.

10. (original) The power factor correction circuit of claim 9, wherein said inductor is used to filter noise.

11. (original) The power factor correction circuit of claim 9, wherein said winding, said secondary winding and said primary winding are wound in a same core.

12. (cancelled)

13. (original) The power factor correction circuit of claim 9, wherein the ratio of the number of the turns of said winding to said primary winding approaches 1.

14. (original) The power factor correction circuit of claim 9, wherein said switching device controls said capacitor to charge said primary winding.

15. (original) The power factor correction circuit of claim 9, wherein said capacitor is charged when said diode is forward-biased.

16. (original) The power factor correction circuit of claim 9, wherein a power is transferred to said secondary winding through said primary winding when said diode is reverse-biased.

17. (currently amended) A power factor correction circuit for improving a power factor of a switching power supply, wherein said switching power supply is composed of said power factor correction circuit and a converter with a secondary winding and a primary winding coupling with a switching device, said circuit comprising:

a winding with an opposite polarity to said primary winding, wherein said winding, said secondary winding and said primary winding are wound in a same core.;

a diode with a p-type side and a n-type side, wherein said p-type side is coupled with said winding;

an inductor coupled with said n-type side of said diode; and

a capacitor coupled with said inductor, wherein said winding, said diode, said inductor and said capacitor are coupled in series, and said capacitor and said inductor have a common node connected with said primary winding.

18. (original) The power factor correction circuit of claim 17, wherein said inductor is used to filter noise.

19. (cancelled)

20. (original)The power factor correction circuit of claim 17, wherein the ratio of the number of the turns of said winding to said primary winding approaches 1.

21. (original)The power factor correction circuit of claim 17, wherein said switching device controls said capacitor to charge said primary winding.

22. (original)The power factor correction circuit of claim 17, wherein said capacitor is charged when said diode is forward-biased.

23. (original)The power factor correction circuit of claim 17, wherein a power is transferred to said secondary winding through said primary winding when said diode is reverse-biased.